

Asthma is a reversible breathing problem caused from sudden or progressive narrowing and spasming of the smaller airways and includes mucus production, which interferes with oxygen exchange. People who suffer from asthma have sensitive airways. When exposed to certain triggers, their airways narrow, making it hard for them to breathe.

There are two main factors that can cause the airways to become narrowed:

1. The inside of the lining of the airways becomes red, swollen and inflamed, and mucus may be produced.
2. The muscles surrounding the airways constrict.

### **Why do asthmatics get asthma in the first place?**

Asthma cannot be cured but it can be managed. Good asthma management can lead to a productive lifestyle. The causes of asthma are not fully understood, but there can be a family history of hay fever, asthma, or eczema. Asthma can appear at any age and can affect all walks of life.

### **Precautions to take to help prevent asthma attacks:**

If a person knows the triggers to their asthma attacks, they can take a few precautions to help reduce the risk of an attack.

1. If chemicals are a trigger to an attack - either use PPE's (Personal Protective Equipment) or change the chemicals if possible.
2. If exercise or activity are a trigger - take 2 puffs of reliever medication 5 – 10 minutes before beginning the activity. Remembering to warm up before activity and to cool down after the activity.
3. If dust and/or dust mites are a trigger – remove all carpet from the area.

### **Risk Management strategies**

Risk management strategies will be included in the: Organisation's asthma policy

- Organisation's emergency asthma management plan
- Emergency first aid management and protocols for asthma
- Person's asthma management plan developed by their healthcare provider

### **Signs leading up to an asthma attack:**

Asthma sufferers can often show signs, days before an asthma attack can occur. This can provide an opportunity to identify that a person's asthma is worsening or that they are at risk of suffering a major attack.

These signs could be:

- Reduced ability to do usual activities.
- Need to use their blue reliever puffer more than 3 times a week to manage asthma symptoms.
- Likely to be tired, lethargic, irritable and/or have lack of concentration.
- Behaviour changes

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## Triggers of an Asthma attack

- Colds and flu
- Animal hair and dander
- Changes in temperature
- Chemicals, perfume scents
- Exercise – (can be managed)
- Dust Mites
- Alcohol or some soft drinks
- Some preservatives
- Some foods
- Pollens, mould and grasses
- Cigarette Smoke
- Certain Drugs
- Some Occupational hazards

Asthma symptoms vary from person to person. Some sufferers may present with all the symptoms, while others may only have the wheeze or the cough.

## Signs and Symptoms may include:

- Moderate to severe breathing difficulties
- Shortness of breath – fast shallow breathing
- Wheezing – a high pitched sound when exhaling
- Tight chest – the chest wall is not expanding normally
- Coughing – usually occurs at night or in cold conditions
- Paleness, sweaty, blueness of lips, fingertips, or earlobes
- Quiet and subdued
- Possibly unconscious

## Asthma severity classifications:

### Mild Asthma:

- ✓ Soft wheeze
- ✓ Minor breathing difficulties
- ✓ Cough
- ✓ Casualty speaks in sentences

### Moderate Asthma:

- ✓ Loud wheeze
- ✓ Increasing breathing difficulties
- ✓ Persistent cough
- ✓ Casualty speaks in phrases

### Severe Asthma

- ✓ Wheeze may not be heard
- ✓ Extreme difficulty in breathing or gasping for breath
- ✓ Distressed and anxious – may be hyperventilating
- ✓ Casualty speaks in single words only
- ✓ Pale and sweaty
- ✓ Blue lips and earlobes

## Asthma medications:

Relievers
Preventers
Symptom Controllers
Combination Medications

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## Reliever Puffers:

- ✓ Usually blue or blue/grey in colour
- Ventolin
- Asmol
- Bricanyl
- Airomir
- Epaq
- Atrovent (white case with green lid)
- ✓ These are bronchodilators. They relax the muscles around the airway to relieve symptoms of shortness of breath, coughing, chest tightness and wheeze
- ✓ Works within 4 minutes
- ✓ Can be used to reduce the risk of exercise induced asthma (EIA)
- ✓ Is safe and not-addictive. A person experiencing the signs of asthma can be administered large quantities of blue reliever medication safely



Blue reliever medication (Salbutamol) is the only medication that should be used by or administered to someone displaying the signs of worsening asthma or an asthma attack. Therefore it is the only medication that should be used in a first aid or emergency situation.

When receiving high dosed of a blue reliever, a person may expect to feel jittery have shaky hands etc. This is a normal response to the medication.

## Preventer Puffers:

- Usually Autumn colours – brown, yellow, orange, rust
- ✓ Reduces and controls inflammation of the bronchial tubes
- ✓ Makes the airways less sensitive to triggers
- ✓ Dries up mucus
- ✓ Can take up to 4 weeks to take effect
- ✓ Reduces the severity and frequency of asthma attacks



## Symptom Controllers:

- Green or light blue in colour
- ✓ Long acting relievers
- ✓ Reduces bronchospasms for up to 12 hours



## Combination Medications:

- Purple, or red & white in colour
- ✓ Combination of preventer and system controllers
- ✓ Reduces bronchospasms



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## Delivery Devices

### **Metered Dose Inhalers (MDI's):**

- Metered dose inhalers have plastic cases in the shape of an “L” and a metal canister inserted into it. Medication is delivered at a high speed

#### How to use a metered dose inhaler without spacer

- 1) Remove cap from the mouthpiece of the inhaler
- 2) Hold inhaler upright and shake
- 3) Breathe out
- 4) Tilt your head back
- 5) Place the puffer in mouth and seal with lips
- 6) Breathe in deeply through the inhaler, while pressing down on the inhaler
- 7) Remove puffer from mouth, close mouth and hold breath for up to 10 seconds
- 8) Breathe out slowly through the nose
- 9) Replace the cap on the inhaler



- ✓ If further doses are required, repeat the above steps
- ✓ The casualty should have 4 normal breaths between each firing of the inhaler
- ✓ If using a metered dose inhaler for preventer medication, take the correct dosage as prescribed by your doctor

#### How to use a metered dose inhaler with spacer

- 1) Remove cap from the mouthpiece of the inhaler
- 2) Place the inhaler into the spacer
- 3) Hold inhaler upright and shake
- 4) Breathe out
- 5) Tilt your head back
- 6) Place the spacer into the mouth and seal with lips
- 7) Pressing down on the inhaler
- 8) Breathe in deeply through the spacer holding your breath for up to 10 seconds or as long as comfortable. You do this for 4 breaths
- 9) Remove spacer from mouth
- 10) Replace the cap on the inhaler



- ✓ If further doses are required, repeat the above steps
- ✓ The casualty should have 4 normal breaths between each firing of the inhaler
- ✓ If using a metered dose inhaler for preventer medication, take the correct dosage as prescribed by your doctor



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## How to use a Turbuhaler:

- 1) Unscrew the cover and remove it
  - 2) Hold the Turbuhaler upright
  - 3) To load the medication, twist the base to the right and back to the left. You will hear it click
  - 4) Breathe out, away from the Turbuhaler
  - 5) Place the Turbuhaler in your mouth and seal with lips
  - 6) Breathe in deeply through the Turbuhaler up to 5 seconds
  - 7) Remove Turbuhaler from mouth and hold breath for up to 10 seconds
  - 8) Breathe out slowly through the nose away from the Turbuhaler
- ✓ If further doses are required, repeat the above steps
  - ✓ The casualty should have 4 normal breaths between each firing of the inhaler
  - ✓ If using a metered dose inhaler for preventer medication, take the correct dosage as prescribed by your doctor



## Treatment

Follow the casualties own asthma management plan

**If the casualty does not have an asthma management plan then follow the 4x4x4 asthma management plan**

## The four step asthma management plan

### Step 1:

- ✓ Sit the person down. NEVER LAY AN ASTHMATIC DOWN WHO IS HAVING AN ATTACK
- ✓ Remain calm
- ✓ Provide reassurance. Encourage slow breathing
- ✓ Do not leave the casualty alone

### Step 2:

- ✓ Give 4 puffs of a blue reliever inhaler
- ✓ One puff at a time through a spacer
- ✓ Ask the casualty to take 4 breaths from the spacer after each puff
- ✓ Shake puffer after each firing
- ✓ If no spacer is available, use a blue reliever inhaler on its own

### Step 3:

- ✓ Wait 4 minutes

### Step 4:

- ✓ If there is little or no improvement, repeat steps 2 and 3
- ✓ If there is still little or no improvement, call for an Ambulance immediately

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- ✓ While waiting for the ambulance have 4 puffs of reliever medication every 4 minutes until the ambulance arrives.
- ✓ In a severe attack the adult dose may be exceeded to 6 to 8 puffs every 5 minutes. This reliever medication works by increasing the size of the airways by reducing inflammation, which helps the casualty to breathe more easily and recover from the attack
- ✓ Children can deteriorate rapidly – beware of the ASTHMATIC CHILD.
- ✓ If an asthmatic is not able to talk, they are in a life-threatening situation. Call 000 immediately (112 Mobiles).
- ✓ Asthma attacks can be frightening. Reassure the casualty.

### Spacers:

Using a spacer with an inhaler is more effective than using an inhaler by itself as:

- ✓ Four times more medication reaches the lungs than when using an inhaler alone
- ✓ When using an inhaler alone, approximately 10% of medication reaches the lungs, when using an inhaler and spacer, 40% reaches the lungs
- ✓ It reduces side effects of medications as more medication is deposited into the lungs
- ✓ It makes inhaler medications easier to take than using the puffer alone and enables a first aider to assist in administering medication when necessary

National Asthma Foundation recommends that all people with asthma use a spacer to take their inhaler medications

### Cleaning of a spacers:

Before using a plastic spacer for the first time, you need to:

- ✓ Wash in warm soapy water
- ✓ Allow to air dry
- ✓ Do Not rinse or wipe dry



Due to health regulations, the national Asthma Foundation now recommends the use of disposable spacers in an organisations Asthma Emergency First Aid Kit.

For more information on Asthma, and Asthma management please contact:

Asthma NSW on [www.asthmansw.org.au](http://www.asthmansw.org.au) 02 99063233  
OR

Asthma Australia on [www.asthmaaustralia.org.au](http://www.asthmaaustralia.org.au) 03 96967861

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